

Work Order ID 110023***110023***

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December-17-13 9:06:22 AM

Item ID: D412-742-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID:
Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible Stop ***NS2***
Start Date: 12/17/13 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 12/17/13 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: RP Date: 13-12-17 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	I								

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG005

N/A MLJ 180714

Work Order ID 110023

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Item ID: D412-742-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible

Start Date: 12/17/13 Start Qty: 1.00

1

Cust Item ID:

Required Date: 12/17/13 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00

110

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

1-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.
A/RSikaflex-241/-291 14129457
Expiry date: 14/11

2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Seal all bolts with sikaflex except ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.

A/RSikaflex-241/-291 14129457
Expiry date: 14/11

3-Remove "T" pins once sikaflex is dry.

4-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.
A/RLPS Procyon 14127900

14/11 14/07/10

DQA:

Date: 14/08/01



QA Closed:

Date: 14/7/14

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>110023</u> Part No. <u>DY12-742-043</u> NCR No. <u>14-4033</u>				DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design ☐	14/07/10	110	4	Found at Assembly that D3591-1 Bushings ARE TOO loose when installed the 0.499" hole is measured 0.510" - 0.502" RL material bleccom. GMT	DAS 12 9-89 14/7/11	Acceptable. B3591-1 B121446 Bushings fit with proper press fit	DAS 12 9-89 14/7/11	DAS 16 9-89 14/07/11	DAS 16 9-89 14/04/23		
Doc/Data ☐											
Equip/Tooling ☐											
Handling/Pre ☐											
Material ☐											
Operator ☐											
Offset/Setup ☐											
Process ☐											
Supplier ☐											
Training ☐											
Transport ☐											
Unapproved ☐											

FAULT CATEGORY								
Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube		General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function		☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

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Item ID: D412-742-043 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible
 Start Date: 12/17/13 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 12/17/13 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 DAS 16 0.00-89							
130 *130* Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D412-742-043 Location: _____ PPP Rev: _____	0.00 0.00		PPD 113933		1	DAS 06 9-89		JUL 11 2014
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							MLJ 1407-14 ①4-7-11

Picklist Print

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Work Order ID: 110023

Parent Item: D412-742-043

Start Date: 12/17/13

Required Date: 12/17/13

Parent Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC IPP Rev:F 11.11.01 as per DSI9517
 REV.B DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3391-021 Fwd Tube Assembly		Manufactured	No				Each	0.0000		1 B101640(1x) JLM 14/05/08			
D3391-023 Mid Tube Assembly		Manufactured	No			110	Each	0.0000		1 B111887(1x) JLM 14/05/08			
D3391-025 Aft Tube Assembly		Manufactured	No			110	Each	0.0000		1 B102345(1x) JLM 14/05/08			
AN3C4A Bolt		Purchased	No			110	Each	2,966.0000		24 M128739(x24) JLM 14/05/08			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FG		20							
				122814		20							
				ST512		44							
				M126765		44							
				ST513		2902							
				125388		1908							
				M127410		994							
AN3C6A Bolt		Purchased	No			110	Each	658.0000		10 M128224(x10) JLM 14/05/08			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FG		10							
				122416		10							
				FP001		30							
				122599		30							
				ST350		17							
				122416		17							
				ST513		601							
				m125709		601							

Picklist Print

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Work Order ID: 110023

Parent Item: D412-742-043

Start Date: 12/17/13

Required Date: 12/17/13

Parent Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No 110 Each 910.0000 4 38 4 11/04/09

Bolt

Location Loc Qty Loc Code

FG 10

122141 10

ST351 10

123900 6

124221 4

ST513 890

m125709 890

NAS1149C0332R

Purchased No

110 Each 10,701.000

38 38 M 128591 (x38) 11/04/09

WASHER

Location Loc Qty Loc Code

FP001 254

123355 254

GA 1548

125654 1548

ST292 119

123248 18

123759 10

125268 91

st510 8654

m126319 3154

m127306 2500

m127410 3000

ST517 126

124580 126

D4095-041

Manufactured No

110 Each 12.0000

1 1 B112409(1x) 11/04/09

Wearplate Assembly

Location Loc Qty Loc Code

FP002 12

108286 2

109667 10

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Shop Packet Print

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Picklist Print

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Work Order ID: 110023

Parent Item: D412-742-043

Parent Item Name: Replacement Skidtube (Fits LH or RH) High Gear Apical Tri-Bag Float Compatible

Start Date: 12/17/13

Required Date: 12/17/13

Start Qty: 1.00

Required Qty: 1.00

D4095-043 Manufactured No 110 Each 3.0000
Wearplate Assembly

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	3	
106162	2	
109668	1	

¹ B111932(1x) ¹ All 12/10/10

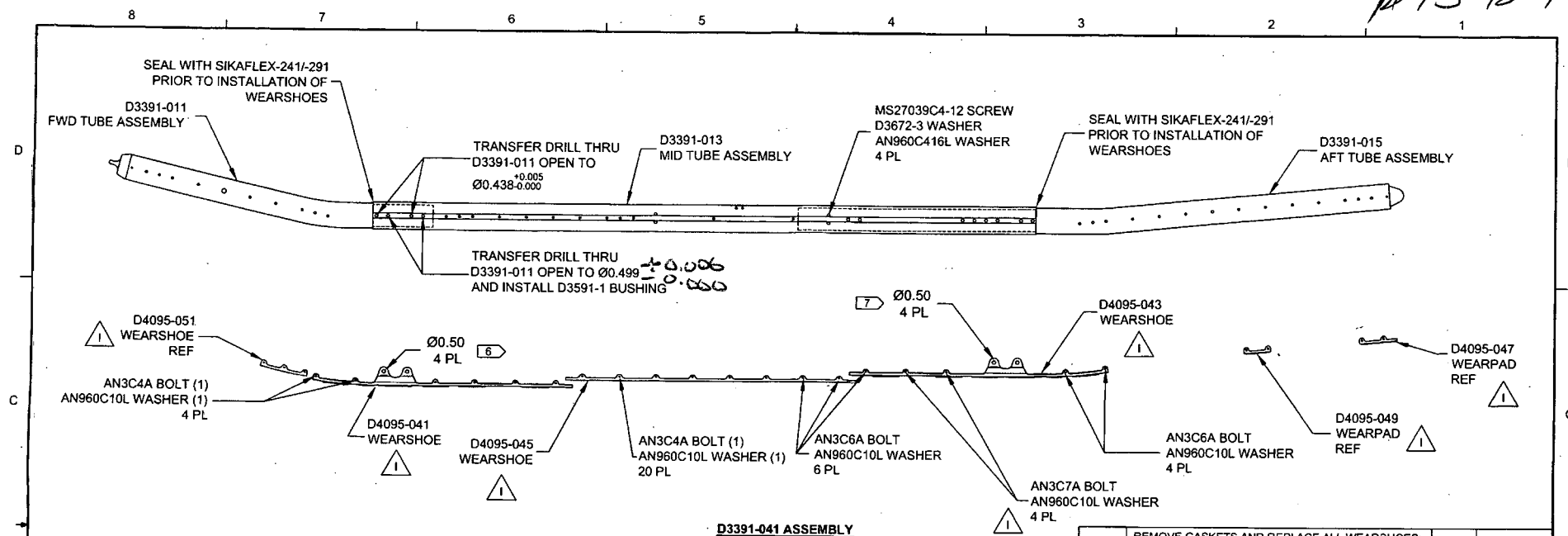
D4095-045 Manufactured No 110 Each 16.0000
Wearplate Assembly

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	16	
108288	1	
109669	11	
77737	1	
84081	1	
93054	2	

¹ B112308(1x) ¹ All 12/10/10

110023

13-12-17



D3391-041 ASSEMBLY

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

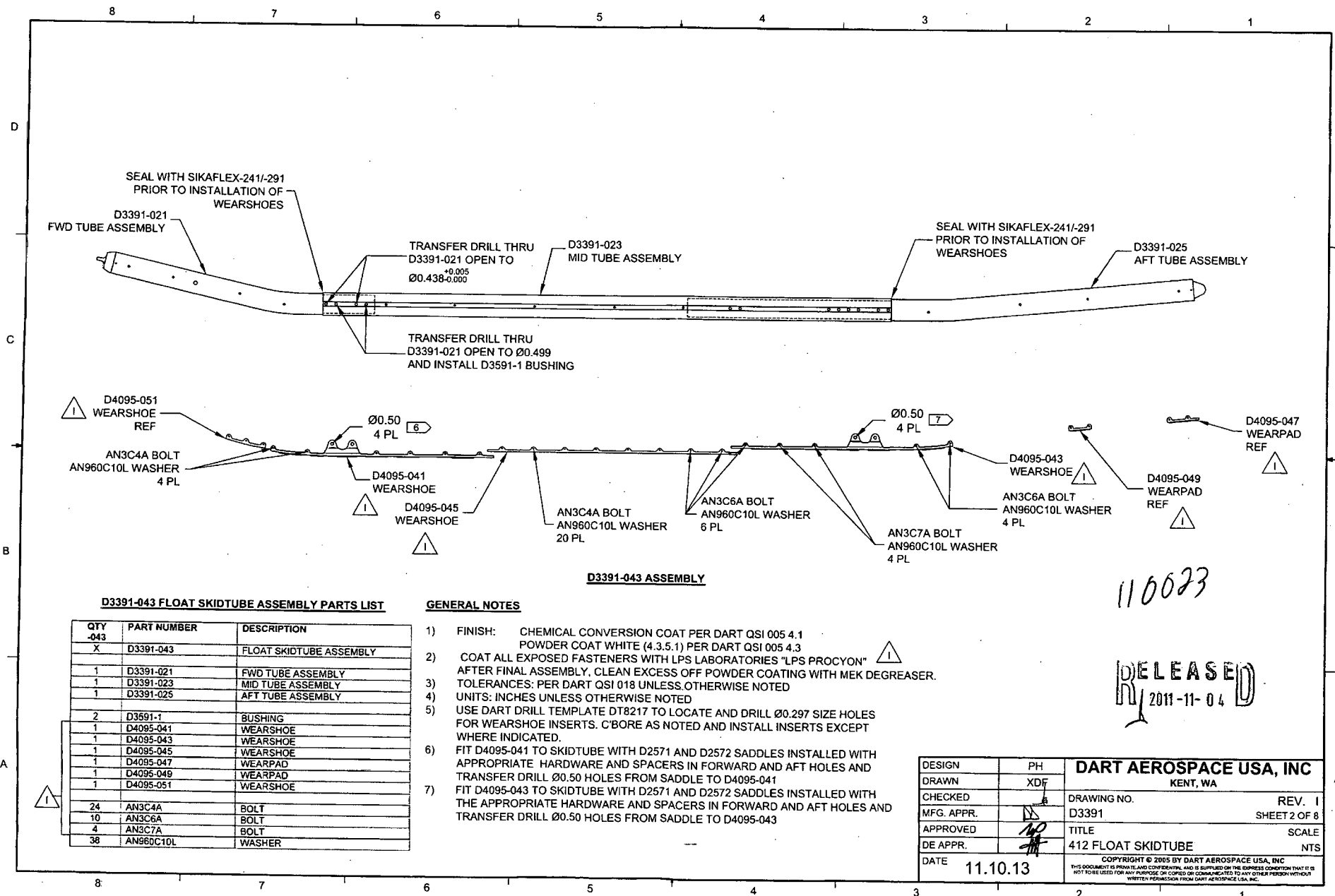
QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

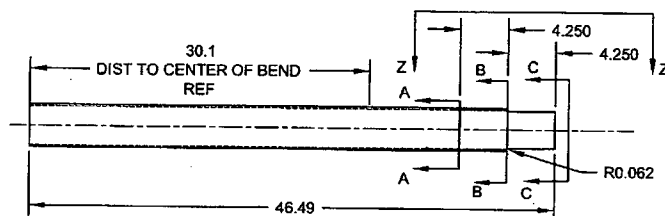
GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. CBORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

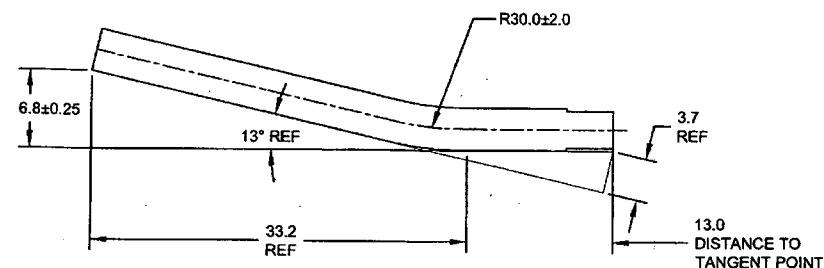
RELEASED
2011-11-04
ECN#11-662

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL. ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL. ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC KENT, WA	
DRAWN	XDF		
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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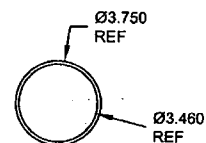




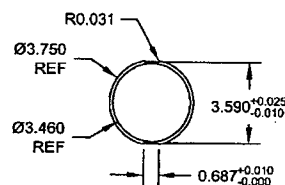
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



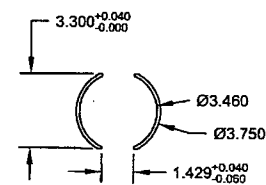
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



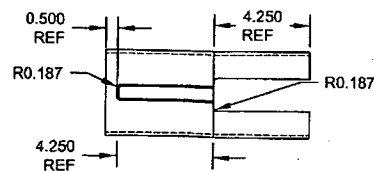
SECTION A-A
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SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



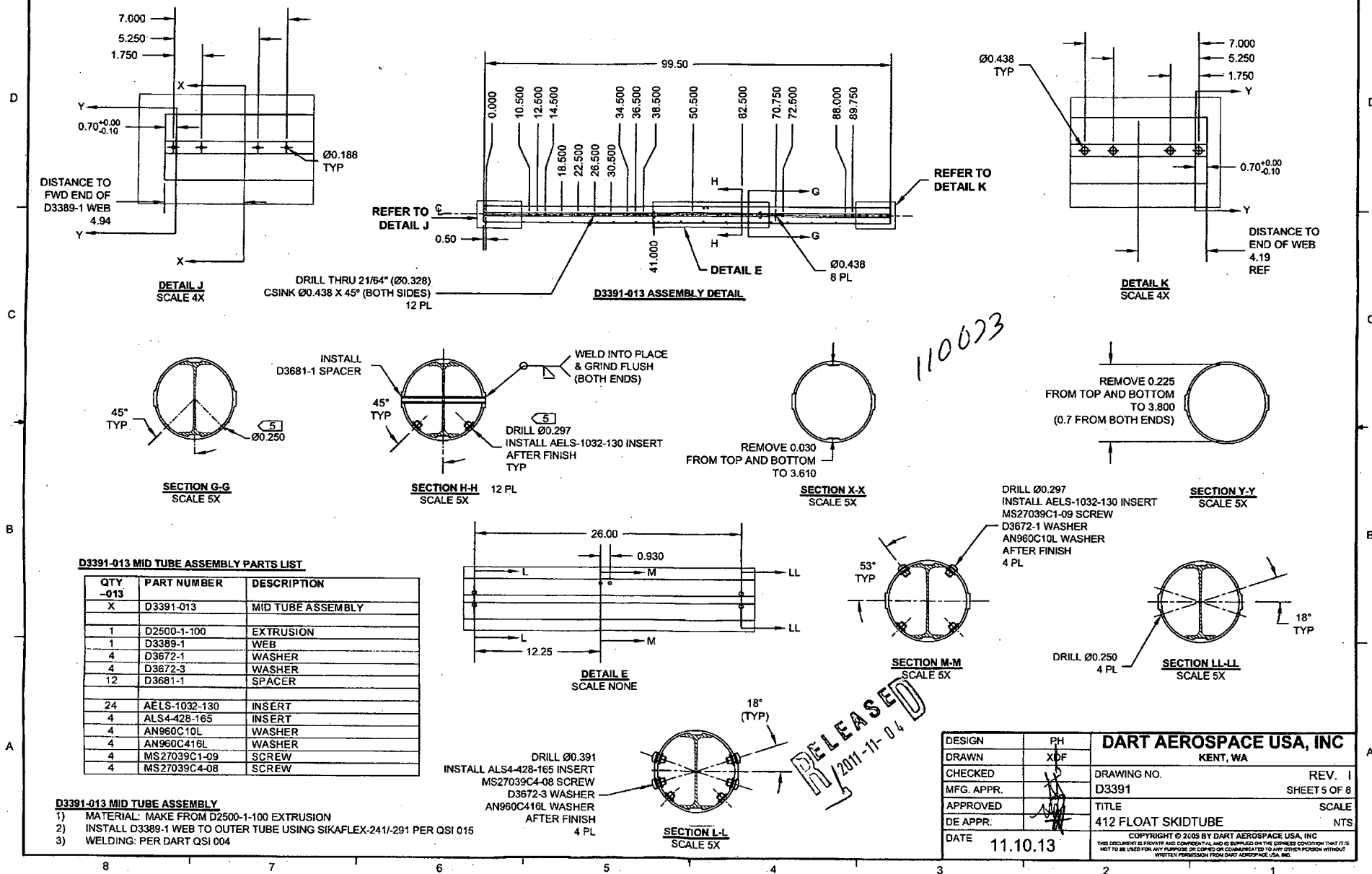
VIEW ZZ
SCALE 2X

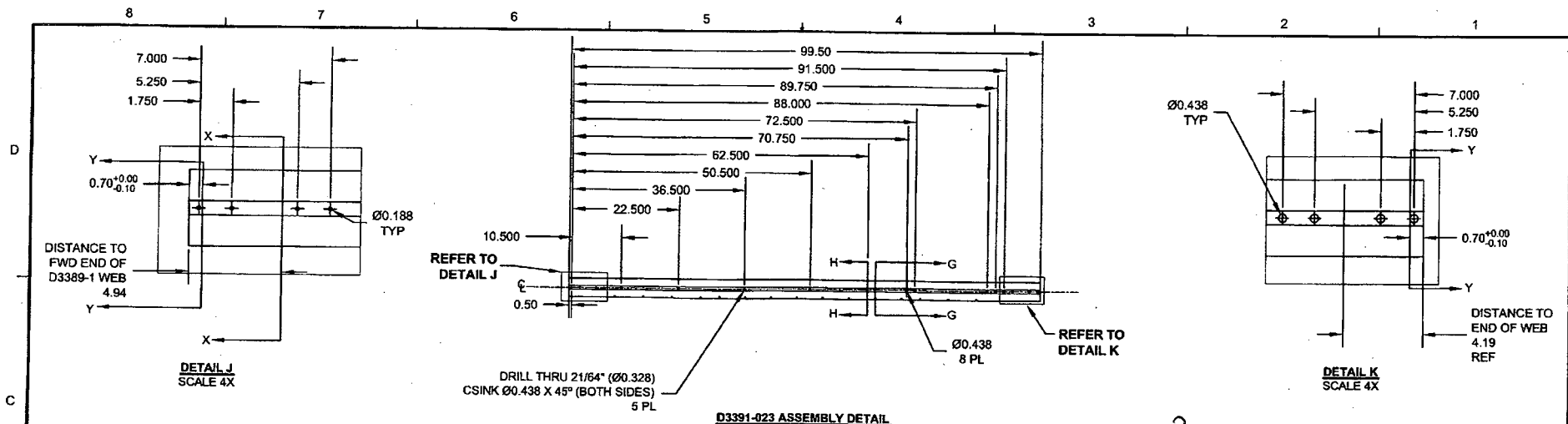
110623

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2011-11-04

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8 7 6 5 4 3 2 1

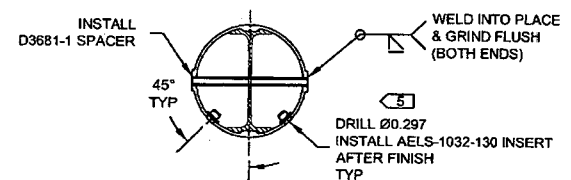




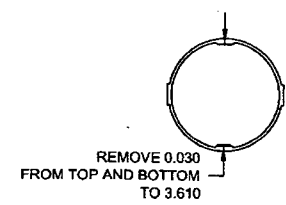
110023



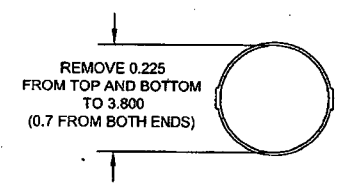
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

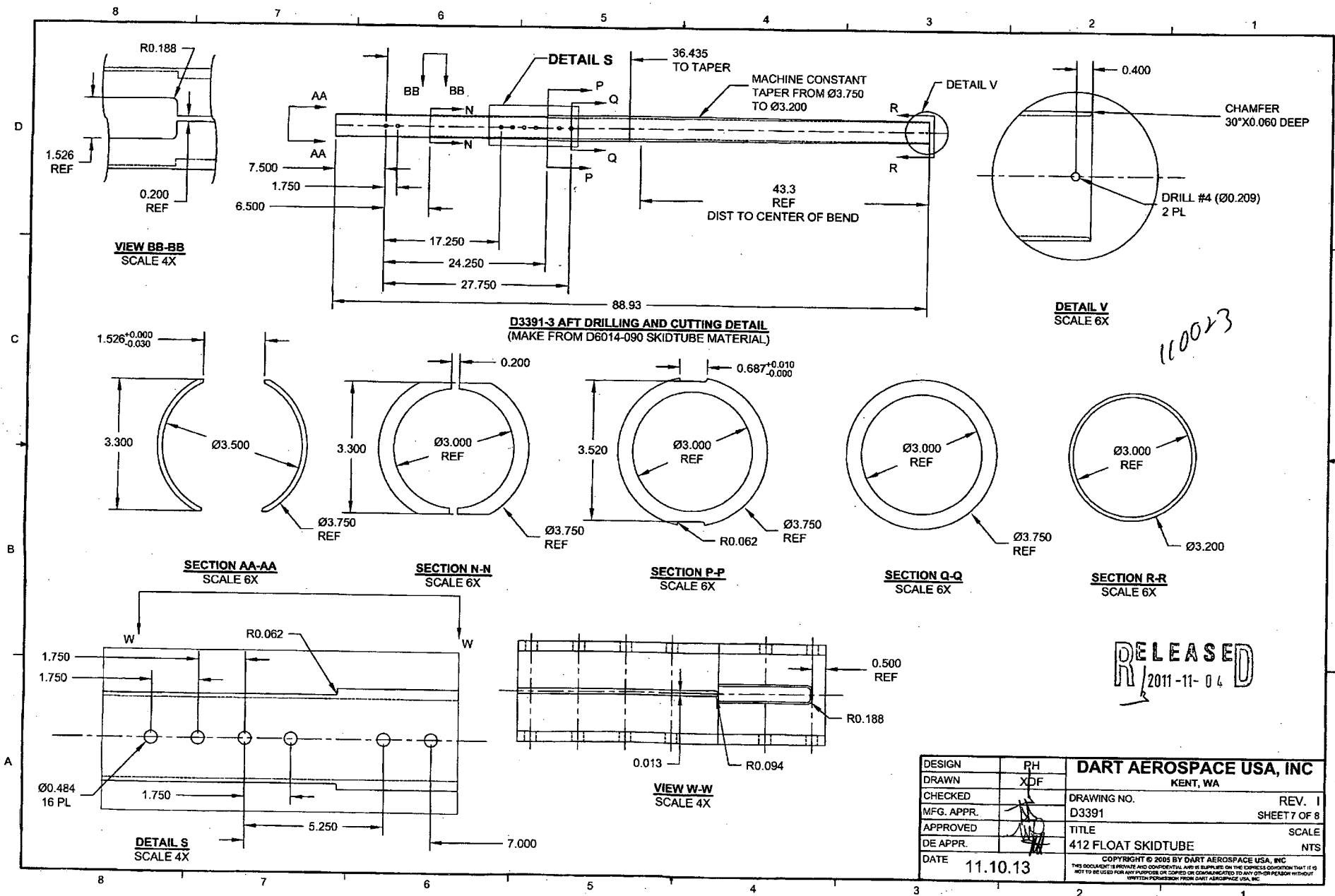
QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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2011-11-04

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CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 6 OF 8
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